

**Meeting of the Central Valley Flood Protection Board  
October 28, 2010**

**Staff Report – Encroachment Permit**

**River Garden Farms  
Fish Screen, Colusa County**

---

**1.0 – ITEM**

Consider approval of Permit No. 18588 (see Attachment B)

**2.0 – APPLICANT**

River Garden Farms

**3.0 – LOCATION**

The project is located north of Knights Landing, east of Highway 45 at County Road 112 (Sacramento River, Colusa County, see Attachment A).

**4.0 – DESCRIPTION**

The applicant proposes to install a self-cleaning, retractable fish screen system (42-inch-diameter, 66-inch-long double screen cylinder) on an existing agricultural irrigation water diversion on the right (west) bank levee of the Sacramento River.

**5.0 – PROJECT ANALYSIS**

The proposed fish screen system is proposed to be installed by attaching the system directly to the existing intake pipes which will be strengthened as part of this project. This method of installation does not require any new piles to be installed within the Sacramento River and therefore reduces the hydraulic impacts for the project. All component parts for the fish screen, docking inlet, retrieval track and inspection platform are proposed to be attached to the strengthened conductor pipes and the existing pump house. This project is compatible with the existing plan of flood control.

**5.1 – Hydraulic Analysis**

A hydraulic analysis was not needed as the proposed fish screen will have a very minimal local hydraulic impact to the Sacramento River.

## **5.2 – Geotechnical Analysis**

A geotechnical analysis was not required as there is no earthwork involved with this project.

## **6.0 – AGENCY COMMENTS AND ENDORSEMENTS**

The comments and endorsements associated with this project, from all pertinent agencies are shown below:

- The U. S. Army Corps of Engineers 208.10 comment letter has not yet been received for this application. Upon receipt of a favorable letter and review by Board staff it will be incorporated into the permit as Exhibit A.
- The Sacramento River West Side Levee District has endorsed this project with no conditions.

## **7.0 – CEQA ANALYSIS**

Board staff has prepared the following CEQA determination:

California Department of Fish and Game (CDFG), as lead agency under CEQA, approved the project (River Garden Farms Fish Screen Project, SCH No. 201058093) on May 10, 2010 and determined that the project was categorically exempt under Class 4 (CEQA Guidelines Section 15304 (d)) covering minor alterations to land, water, and vegetation on existing officially designated wildlife management areas or fish production facilities which result in improvement of habitat for fish and wildlife resources or greater fish production.

The Board, acting as a responsible agency under CEQA, has reviewed the CDFG determination and has independently determined that the project is exempt from CEQA Class 4 (CEQA Guidelines Section 15304 (d)) covering minor alterations to land, water, and vegetation on existing officially designated wildlife management areas or fish production facilities which result in improvement of habitat for fish and wildlife resources or greater fish production.

## **8.0 – SECTION 8610.5 CONSIDERATIONS**

1. Evidence that the Board admits into its record from any party, State or local public agency, or nongovernmental organization with expertise in flood or flood plain management:

The Board will make its decision based on the evidence in the permit application and attachments, this staff report, and any other evidence presented by any individual or group.

2. The best available science that related to the scientific issues presented by the executive officer, legal counsel, the Department or other parties that raise credible scientific issues.

The accepted industry standards for the work proposed under this permit as regulated by Title 23 have been applied to the review of this permit.

3. Effects of the decision on the entire State Plan of Flood Control:

This project will have no impacts to the State Plan of Flood Control.

4. Effects of reasonable projected future events, including, but not limited to, changes in hydrology, climate, and development within the applicable watershed:

There will no effects from projected future events on the proposed fish screen.

## **9.0 – STAFF RECOMMENDATION**

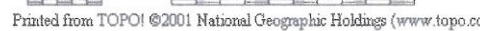
Staff recommends that the Board adopt the CEQA findings, approve the permit upon receipt of a favorable comment letter from the Army Corps, and direct staff to file a Notice of Determination with the State Clearinghouse.

## **10.0 – LIST OF ATTACHMENTS**

- A. Location Maps and Photos
- B. Draft Permit No. 18588
- C. Detailed Plans

Design Review:	Steve Dawson / Jon Tice, P.E.
Environmental Review:	Andrea Mauro / James Herota
Document Review:	Gary Lemon, P.E. / Len Marino, P.E.

This page intentionally left blank.



OVERHEAD VIEW

River Garden Farms #2

Missouri Bend Pumping  
Plant

Sacramento Valley/  
Delta Fish Screen  
Program

Project No. Y01-03

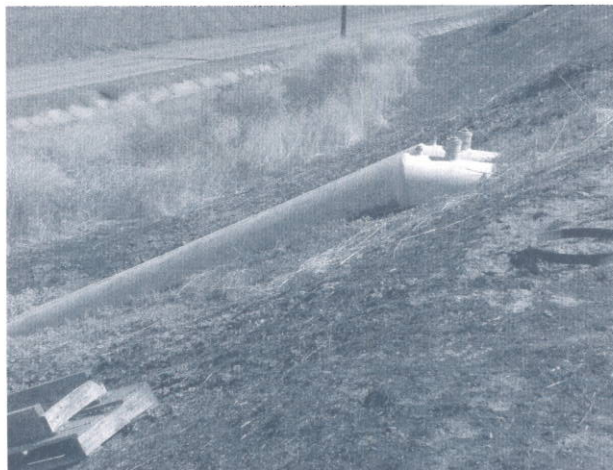
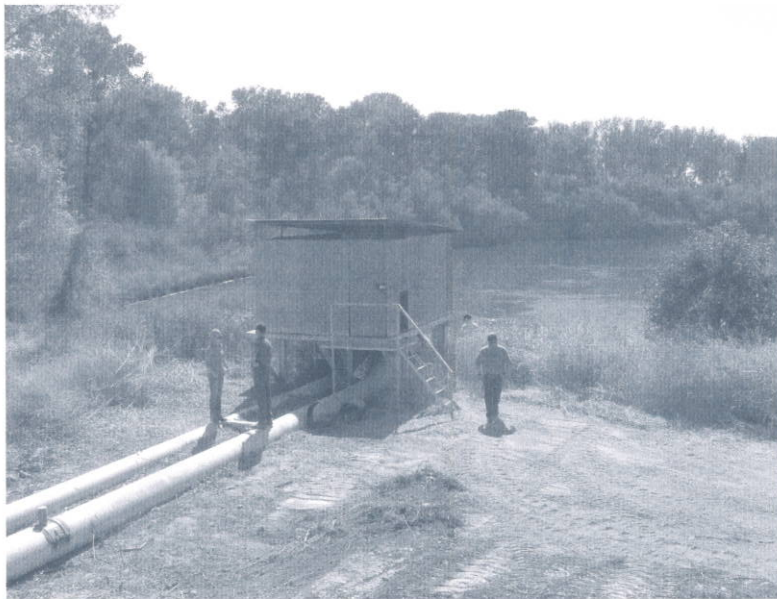
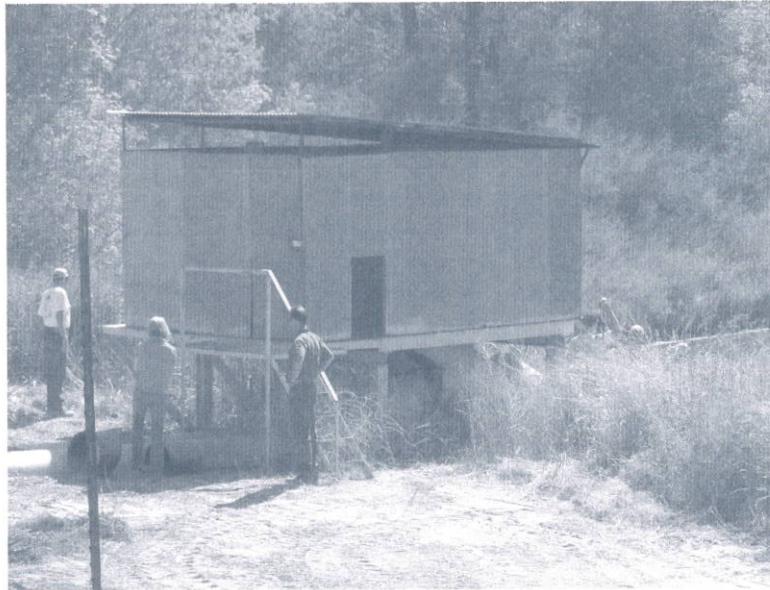
Sacramento River  
West Side

RM 96.7



**Original Site Pictures – River Garden Farms #2 – Missouri Bend**

**Attachment A,  
Photographs**



This page intentionally left blank.

**DRAFT**

STATE OF CALIFORNIA  
THE RESOURCES AGENCY  
**THE CENTRAL VALLEY FLOOD PROTECTION BOARD**

**PERMIT NO. 18588 BD**

**This Permit is issued to:**

River Garden Farms  
41758 County Road 112  
Knights Landing, California 95645

To install a self-cleaning, retractable fish screen system (42-inch-diameter, 66-inch-long double screen cylinder) on an existing agricultural diversion on the right (west) bank levee of the Sacramento River. The project is located north of Knights Landing, east of Highway 45 at County Road 112, River Mile 96.7 (Section 28, T12N, R2E, MDB&M, Sacramento River West Side Levee District, Sacramento River, Colusa County).

**NOTE:** Special Conditions have been incorporated herein which may place limitations on and/or require modification of your proposed project as described above.

**(SEAL)**

Dated: \_\_\_\_\_

\_\_\_\_\_  
Executive Officer

**GENERAL CONDITIONS:**

**ONE:** This permit is issued under the provisions of Sections 8700 – 8723 of the Water Code.

**TWO:** Only work described in the subject application is authorized hereby.

**THREE:** This permit does not grant a right to use or construct works on land owned by the Sacramento and San Joaquin Drainage District or on any other land.

**FOUR:** The approved work shall be accomplished under the direction and supervision of the State Department of Water Resources, and the permittee shall conform to all requirements of the Department and The Central Valley Flood Protection Board.

**FIVE:** Unless the work herein contemplated shall have been commenced within one year after issuance of this permit, the Board reserves the right to change any conditions in this permit as may be consistent with current flood control standards and policies of The Central Valley Flood Protection Board.

**SIX:** This permit shall remain in effect until revoked. In the event any conditions in this permit are not complied with, it may be revoked on 15 days' notice.

**SEVEN:** It is understood and agreed to by the permittee that the start of any work under this permit shall constitute an acceptance of the conditions in this permit and an agreement to perform work in accordance therewith.

**EIGHT:** This permit does not establish any precedent with respect to any other application received by The Central Valley Flood Protection Board.

**NINE:** The permittee shall, when required by law, secure the written order or consent from all other public agencies having jurisdiction.

**TEN:** The permittee is responsible for all personal liability and property damage which may arise out of failure on the permittee's part to perform the obligations under this permit. If any claim of liability is made against the State of California, or any departments thereof, the United States of America, a local district or other maintaining agencies and the officers, agents or employees thereof, the permittee shall defend and shall hold each of them harmless from each claim.

**ELEVEN:** The permittee shall exercise reasonable care to operate and maintain any work authorized herein to preclude injury to or damage to any works necessary to any plan of flood control adopted by the Board or the Legislature, or interfere with the successful execution, functioning or operation of any plan of flood control adopted by the Board or the Legislature.

**TWELVE:** Should any of the work not conform to the conditions of this permit, the permittee, upon order of The Central Valley Flood Protection Board, shall in the manner prescribed by the Board be responsible for the cost and expense to remove, alter, relocate, or reconstruct all or any part of the work herein approved.

### **SPECIAL CONDITIONS FOR PERMIT NO. 18588 BD**

**THIRTEEN:** All work approved by this permit shall be in accordance with the submitted drawings and specifications except as modified by special permit conditions herein. No further work, other than that approved by this permit, shall be done in the area without prior approval of the Central Valley Flood Protection Board.

**FOURTEEN:** The permittee shall maintain the permitted encroachment(s) and the project works within the utilized area in the manner required and as requested by the authorized representative of the Department of Water Resources, Sacramento River West Side Levee District or any other agency responsible for maintenance.

**FIFTEEN:** The permittee shall contact the Department of Water Resources by telephone, (916) 574-0609, and submit the enclosed postcard to schedule a preconstruction conference. Failure to do so at least 10 working days prior to start of work may result in delay of the project.

**SIXTEEN:** Upon completion of the project, the permittee shall submit as-built drawings to: Department of Water Resources, Flood Project Inspection Section, 3310 El Camino Avenue, Suite LL30, Sacramento, California 95821.

**SEVENTEEN:** The Central Valley Flood Protection Board, Department of Water Resources, and Sacramento River West Side Levee District shall not be held liable for damages to the permitted encroachment(s) resulting from releases of water from reservoirs, flood fight, operation, maintenance, inspection, or emergency repair.

**EIGHTEEN:** The permittee is responsible for all liability associated with construction, operation, and maintenance of the permitted facilities and shall defend, indemnify, and hold the Central Valley Flood Protection Board and the State of California; including its agencies, departments, boards, commissions, and their respective officers, agents, employees, successors and assigns (collectively,

the "State"), safe and harmless, of and from all claims and damages arising from the project undertaken pursuant to this permit, all to the extent allowed by law. The State expressly reserves the right to supplement or take over its defense, in its sole discretion

NINETEEN: The permittee may be required, at permittee's cost and expense, to remove, alter, relocate, or reconstruct all or any part of the permitted encroachment(s) if removal, alteration, relocation, or reconstruction is necessary as part of or in conjunction with any present or future flood control plan or project or if damaged by any cause. If the permittee does not comply, the Central Valley Flood Protection Board may remove the encroachment(s) at the permittee's expense.

TWENTY: The permittee should contact the U.S. Army Corps of Engineers, Sacramento District, Regulatory Branch, 1325 J Street, Sacramento, California 95814, telephone (916) 557-5250, as compliance with Section 10 of the Rivers and Harbors Act and/or Section 404 of the Clean Water Act may be required.

TWENTY-ONE: The permittee shall defend, indemnify, and hold the Central Valley Flood Protection Board and the State of California, including its agencies, departments, boards, commissions, and their respective officers, agents, employees, successors and assigns (collectively, the "State"), safe and harmless, of and from all claims and damages related to the Central Valley Flood Protection Board's approval of this permit, including but not limited to claims filed pursuant to the California Environmental Quality Act. The State expressly reserves the right to supplement or take over its defense, in its sole discretion.

TWENTY-TWO: The permittee shall be responsible for repair of any damages to the project levee and other flood control facilities due to construction, operation, or maintenance of the proposed project.

TWENTY-THREE: If the project, or any portion thereof, is to be abandoned in the future, the permittee or successor shall abandon the project under direction of the Central Valley Flood Protection Board and Department of Water Resources, at the permittee's or successor's cost and expense.

TWENTY-FOUR: No construction work of any kind shall be done during the flood season from November 1 to April 15 without prior approval of the Central Valley Flood Protection Board.

TWENTY-FIVE: Cleared trees and brush shall be completely burned or removed from the floodway, and downed trees or brush shall not remain in the floodway during the flood season from November 1 to April 15.

TWENTY-SIX: In the event existing revetment on the channel bank is disturbed or displaced, it shall be restored to its original condition upon completion of the proposed installation.

TWENTY-SEVEN: Debris that may accumulate on the permitted encroachment(s) and related facilities shall be cleared off and disposed of outside the floodway after each period of high water.

TWENTY-EIGHT: The project site shall be restored to at least the condition that existed prior to commencement of work.

TWENTY-NINE: All debris generated by this project shall be disposed of outside the floodway and off the project site.

THIRTY: If the fish screen system results in an adverse hydraulic impact, the permittee shall provide appropriate mitigation measures, to be approved by the Central Valley Flood Protection Board, prior to implementation of mitigation measures.

THIRTY-ONE: Any additional encroachment(s) on the levee section, waterward berm or within the floodway will require an approved permit from the Central Valley Flood Protection Board and shall be in compliance with the Central Valley Flood Protection Board's regulations (Title 23 California Code of Regulations).

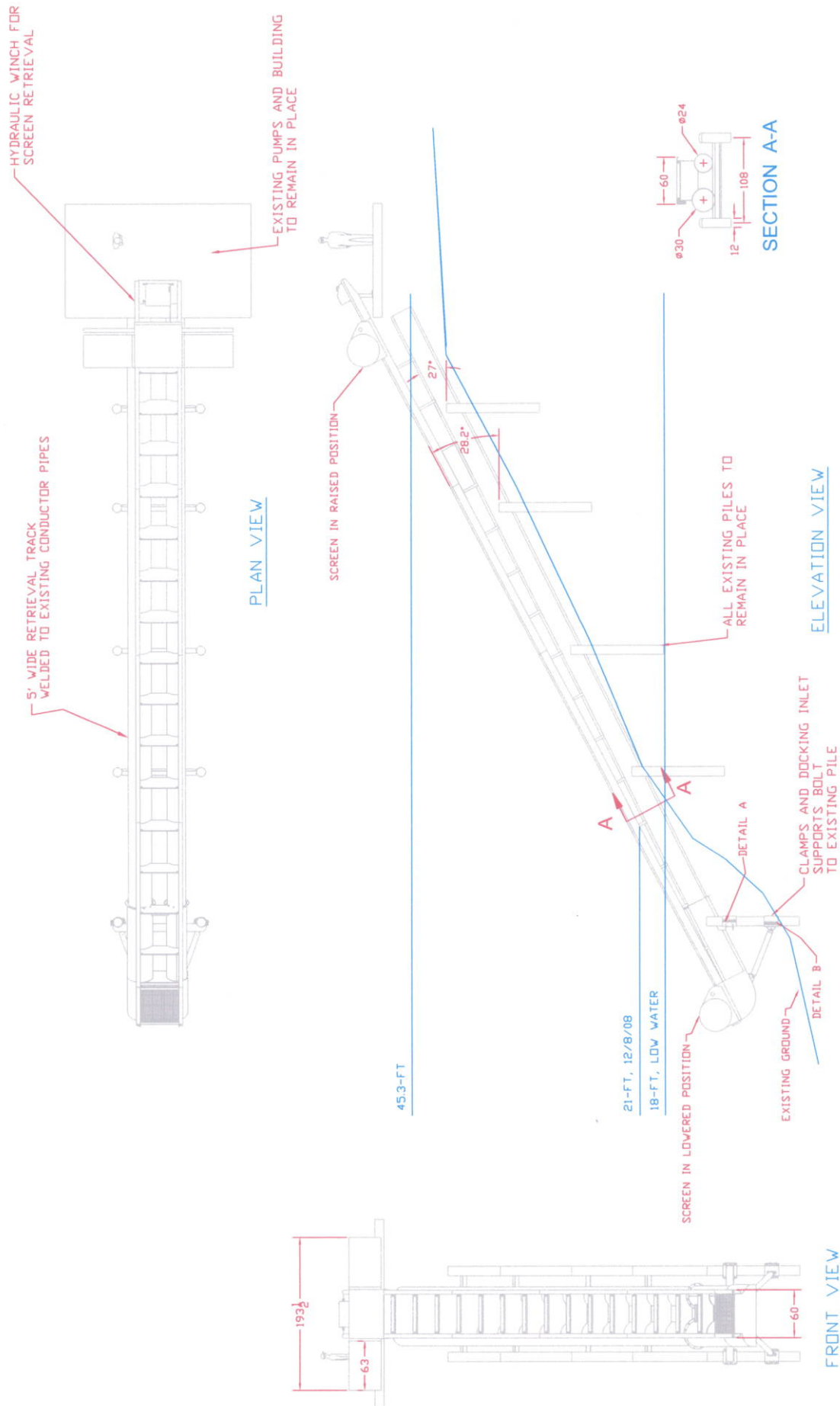
THIRTY-TWO: The permittee shall comply with all conditions set forth in the letter from the Department of the Army dated October XX, 2010, which is attached to this permit as Exhibit A and is incorporated by reference.

# **Exhibit A**

## **Army Corps Comment Letter**

This page intentionally left blank.

## Attachment C, Detailed Plans



 <a href="http://www.intakescreensinc.com">www.intakescreensinc.com</a>		DATE 11/11/09 APPROVED BY DARRYL HAYES DRAWN BY JACOB CHAPIN "B" SHEET SCALE 1:120		PROJECT: RIVER GARDENS DESCRIPTION: RIVER GARDEN LAYOUT MATERIAL: MAIN ASSEMBLY		DRAWING NUMBER: ISI-RG-A	
REV #	DESCRIPTION	DATE	INITIAL				
1	STANDARD TOLERANCES						
2	Fillet Radii: .03125" Min						
3	Dimensional Tolerances						
4	Finish: As Cast						
5	Material: Aluminum						
6	Heat Treatment: T6						
7	Surface Finish: 125						
8	Designs are property of INTAKE SCREENS, INC.						
9	and are subject to change without notice.						

- 1) ALL DIMENSIONS IN INCHES
- 2) DIMENSIONS BASED ON PRELIMINARY SURVEY BY ISI AND ON FACILITY AS-BUILTS
- 3) LOW AND HIGH WATER LEVELS TO BE VERIFIED
- 4) SCREEN DESIGN BASED ON 38 CFS PUMPING CAPACITY WITH A MAX  $V=0.33$  TOTAL MEETS DFG / NMFS CRITERIA
- 5) USGS GAUGE-DATUM WATER ELEVATIONS SHOWN

ISI HYDRAULIC POWER UNIT AND CONTROL PANEL PLACED INSIDE BUILD AND NOT SHOWN

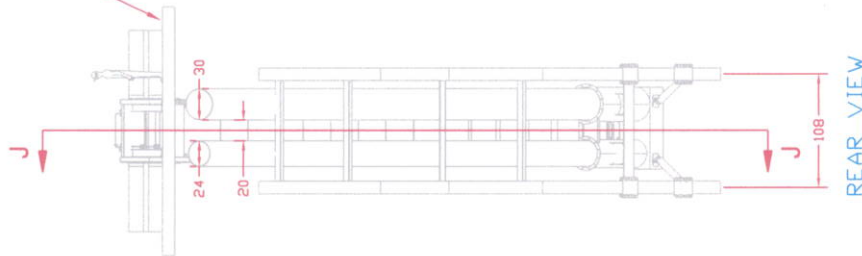
SCREEN LOCKING MECHANISM

ISI-T42-63


EACH TRACK CROSSMEMBERS WELD TO EXISTING CONDUCTOR PIPES.

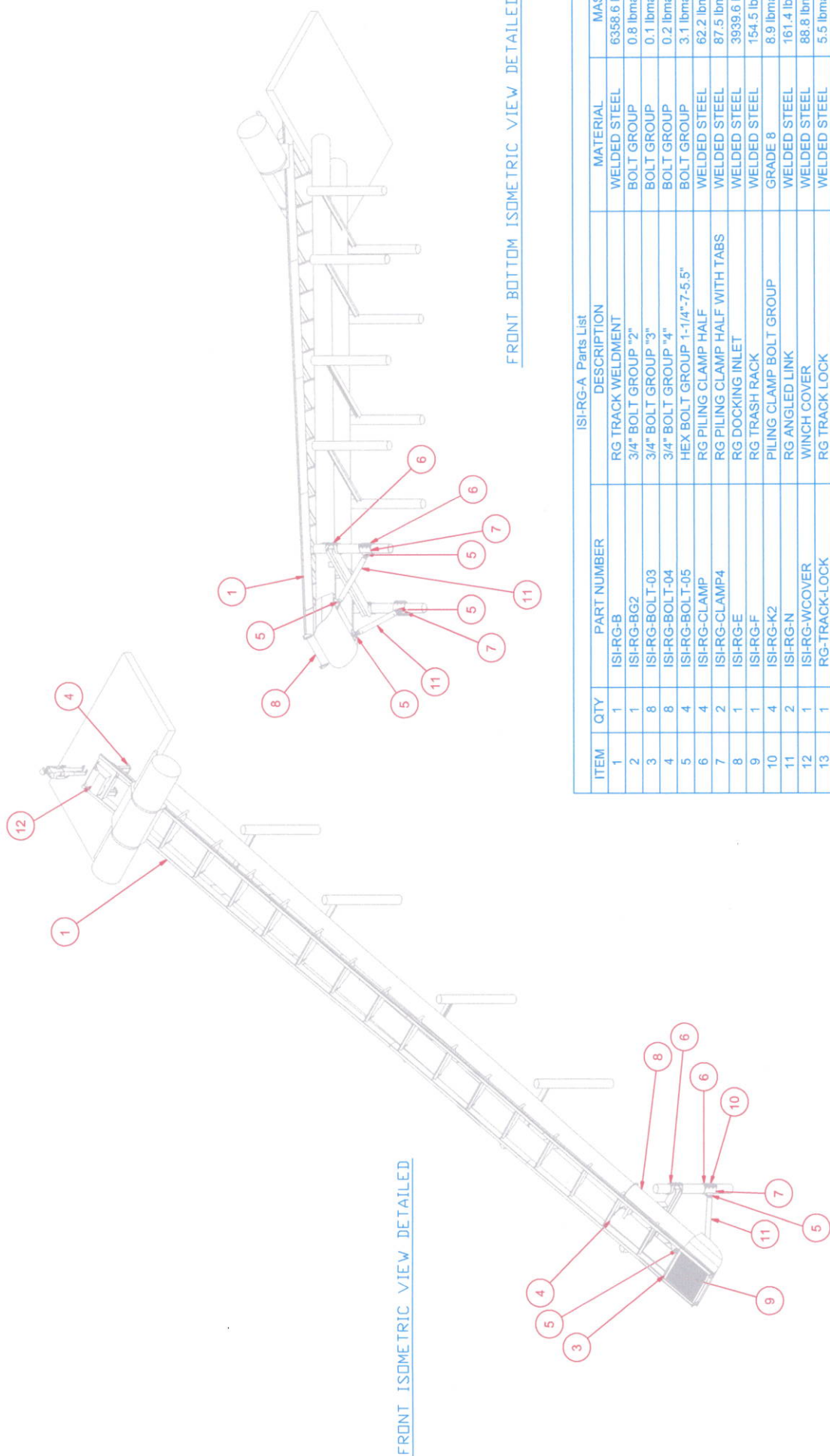
DOCKING INLET TO SLIP OVER EXISTING CONDUCTOR PIPES. CUSTOM PLATE TO SEAL GAPS BETWEEN UNITS.

## SECTION J-J



REAR VIEW

www.intakescreensinc.com				DATE 11/11/09		PROJECT: RIVER GARDENS		DESCRIPTION: RIVER GARDEN LAYOUT		DRAWING NUMBER: ISI-RG-A
 ISI Intake Screens, Inc. 8417 River Road - Sacramento, California 95802 (916) 665-5721 (916) 665-5729 FAX				APP'D BY DARRYL HAYES		DRAWN BY JACOB CHAPIN		MATERIAL: MAIN ASSEMBLY		
REV #		DESCRIPTION		DATE		INITIAL		SHEET SCALE 1:120		



ISI-RG-A Parts List				
ITEM	QTY	PART NUMBER	DESCRIPTION	MASS
1	1	ISI-RG-B	RG TRACK WELDMENT	6358.6 lbmass
2	1	ISI-RG-BG2	3/4" BOLT GROUP "2"	0.8 lbmass
3	8	ISI-RG-BOLT-03	3/4" BOLT GROUP "3"	0.1 lbmass
4	8	ISI-RG-BOLT-04	3/4" BOLT GROUP "4"	0.2 lbmass
5	4	ISI-RG-BOLT-05	HEX BOLT GROUP 1-1/4"-7-5,5"	3.1 lbmass
6	4	ISI-RG-CLAMP	RG PILING CLAMP HALF	62.2 lbmass
7	2	ISI-RG-CLAMP4	RG PILING CLAMP HALF WITH TABS	87.5 lbmass
8	1	ISI-RG-E	RG DOCKING INLET	3939.6 lbmass
9	1	ISI-RG-F	RG TRASH RACK	154.5 lbmass
10	4	ISI-RG-K2	PILING CLAMP BOLT GROUP	8.9 lbmass
11	2	ISI-RG-N	RG ANGLED LINK	161.4 lbmass
12	1	ISI-RG-WCOVER	WINCH COVER	88.8 lbmass
13	1	RG-TRACK-LOCK	RG TRACK LOCK	5.5 lbmass
14	1	RG-TRACK-LOCKLINK	RG TRACK LOCK LINK	3.7 lbmass

www.intakescreensinc.com



ISI Intake Screens, Inc.  
4417 River Road - Sacramento, California 95832  
(916) 662-2121 (916) 662-2129 FAX

REV #	DESCRIPTION	DATE	INITIAL
1	DESIGN	10/26/11	1/23
2	FRISTONE DIMENSIONS	11/11/11	1/23
3	FRISTONE DIMENSIONS	11/11/11	1/23

APPRO'D BY	DARRYL HAYES	PROJECT	RIVER GARDENS
DRAWN BY	JACOB CHAPIN	DESCRIPTION	RIVER GARDEN LAYOUT
SCALE	1"=120'	MATERIAL	MAIN ASSEMBLY
		DRAWING NUMBER	ISI-RG-A

This page intentionally left blank.